SYSTEM AND METHOD FOR THE REUSE of S-CDMA PARAMETERS TO DEFINE TDMA MINISLOT SIZE

ABSTRACT

A system and method is presented for reuseing its S-CDMA related hardware (e.g., timestamp, minislot and frame count hardware) to create an extended mode to DOCSIS 2.0, namely to allow the TDMA channel to have any minislot size as is afforded to the S-CDMA channel. This reuse of existing S-CDMA hardware to create the extended mode is accomplished without the burden (e.g., complexity, cost, and schedule) of additional hardware to perform a separate set of calculations. In order to accomplish the foregoing, parameters are determined to use in a S-CDMA-type UCD message such that when that UCD message is interpreted by both the cable modem and CMTS hardware as though it were an S-CDMA message, the result is an TDMA minislot size that represents a desired integer number of ticks per minislot. In addition, the system and method periodically constructs the relationship between the system timestamp count, a channel's minislot count and the frame count via a timestamp snapshot.